

■ Cloud Migration Roadmap

A Step-by-Step Guide for Smooth & Efficient Migration

1. Define Strategy & Business Objectives

Before moving workloads, define why you are migrating. • Business drivers: Cost reduction, agility, scalability, innovation, disaster recovery, global reach, compliance. • Workload priorities: Which applications bring the highest business value when migrated. • Cloud model choice: Public, Private, or Hybrid Cloud. • Success metrics: KPIs (reduced downtime, improved performance, cost savings).

2. Assess Current Environment

A clear baseline assessment prevents surprises. • Application inventory and dependencies. • Infrastructure analysis. • Compliance & security requirements. • Cost analysis (on-prem vs. cloud). • Staff readiness assessment.

3. Choose Cloud Provider & Services

Selecting the right provider is critical. • Evaluate providers (AWS, Azure, GCP). • Services & tools for compute, storage, monitoring, etc. • Pricing models (pay-as-you-go, reserved instances). • SLAs & security compliance.

4. Define Migration Approach (The 6 R's)

1. Rehost (Lift & Shift). 2. Replatform (Lift & Optimize). 3. Repurchase (Move to SaaS). 4. Refactor (Re-architect). 5. Retire (Decommission apps). 6. Retain (Keep some on-prem).

5. Plan Migration Phases

• Pilot/POC migration first. • Wave-based migration by dependencies. • Prioritize low-complexity, high-benefit workloads. • Use tools like AWS Migration Hub, Azure Migrate, VMware HCX.

6. Design Cloud Architecture

• Create a secure Landing Zone. • Implement IAM, encryption, firewalls. • Plan networking (VPN, Direct Connect). • Data strategy: migration, storage tiers, caching. • Automate with IaC (Terraform, CloudFormation).

7. Execute Migration

• Use migration tools for data transfer and replication. • Monitor workloads during cutover. • Plan downtime carefully with blue/green or canary. • Ensure data synchronization. • Validate workloads before cutover.

8. Testing & Validation

- Functional and performance testing.
- Security validation.
- Cost optimization checks (right-sizing, auto-scaling).

9. Optimize & Modernize

- Performance tuning with CDN, caching, auto-scaling.
- Optimize costs with savings plans, reserved instances.
- Modernize: Containers, microservices, serverless.
- Enhance security with SIEM monitoring.

10. Governance & Continuous Improvement

- Establish a governance framework.
- Monitoring & observability tools.
- Incident management & disaster recovery.
- Upskill teams in cloud-native tools.
- Regular audits for compliance and costs.

■ Final Thoughts

A cloud migration roadmap is not “one size fits all.” Every organization must align migration with business strategy, technical requirements, compliance needs, and financial goals. Success depends on careful planning, phased execution, and continuous optimization.